

REMARKS/ARGUMENTS

In view of the foregoing amendments and following remarks, favorable reconsideration of the pending claims is respectfully requested.

Amendments to the Specification

The Examiner has raised several objections to the specification. In particular, the Abstract has been objected to for including the term “comprising” and page 9, line 22 and page 19, line 7 have been objected to for including typographical errors. The Specification has been amended as suggested by the Examiner and it is therefore submitted that the objections have been overcome.

Amendments to the Drawings

The drawings have been amended as suggested by the Examiner.

Amendments to the Claims

Claims 2-10 and 13-21 have been amended to replace the term “A” in the preamble with “The” as suggested by the Examiner.

Claims 7 and 10 have been amended to delete the “:” after the recitation “...and additional emulsifying system selected from the group consisting of...” as suggested by the Examiner.

New Claim 31 recites that the total amount of cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone in the composition is between 3 and 5 weight percent based on the total weight of the composition. See, for example, the compositions described in Examples 1-8.

New Claim 32 is directed to an embodiment of the invention in which water is a carrier vehicle. See, for example, paragraph [0132].

Prior Art Rejections

Claims 1-9, 13-16, and 19-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,976,514 to Guskey et al. in view of U.S. Patent No. 6,696,067 to Brandt et al. with evidence from U.S. Patent Publication No. 2003/124083 to Filipski et al. Claims 10, 17, and 18 have been rejected under 35 U.S.C. § 103(a) as being

unpatentable over Guskey, Brandt, and Filipski in further view of U.S. Patent Nos. 4,963,591 and 6,267,971 to Fourman et al. and Breton et al., respectively.

Guskey is the primary reference relied on by the Examiner in all the rejections. In particular, the Examiner relies on Guskey for allegedly teaching all the claimed components of the claimed filmogenic system. That is, for teaching a filmogenic system that contains each of the following: cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone as recited in independent Claim 1.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim elements. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). In the present case, that means the combination of Guskey with anyone of the other cited references must teach a composition that necessarily includes each of cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone. In other words, the teachings of the cited art must disclose a composition that includes each of the recited silicone based ingredients.

In relying on Guskey for allegedly teaching the filmogenic system, the Examiner asserts that the composition disclosed by Guskey discloses the silicone components recited in Claim 1. A review of column 8, line 23 through column 11, column 37 shows that Guskey discloses a significantly broad laundry list of silicone compositions that can be used in his composition. Further, based on this laundry list, it is also apparent that a near infinite number of different combinations of silicone compositions could be created using the teachings of Guskey. There is absolutely no teaching in Guskey that would guide one of ordinary skill in the art to select the specific 5 silicone compositions that are recited in claim 1 to create the claimed composition. To more fully appreciate this point, the portion of Guskey relied on by the Examiner is provided below.

The antiperspirant and deodorant compositions of the present invention comprise a skin irritation-mitigating material (also referred to herein as "mitigating material"), wherein the weight ratio of the volatile, nonpolar hydrocarbon liquid defined hereinbefore to the mitigating material is from about 5:1 to about 1:50, preferably from about 4:1 to about 1:10, more preferably from about 3:1 to about 1:5, most preferably from about 2:1 to about 1:1.

The mitigating material for use in the compositions of the present invention include any material effective in reducing skin irritation caused by the volatile, nonpolar hydrocarbon liquid component of the composition, wherein the skin irritation reduction is determined in accordance with the skin irritation methodology described herein. To be effective, it has been found that these mitigating materials must also have a vapor pressure equal to or less than, preferably less than, the vapor pressure of the volatile, nonpolar hydrocarbon liquid in the composition (as measured at 25° C.). It has also been found that the most effective of these mitigating materials are nonvolatile silicone fluids. It has been found that the volatile, nonpolar hydrocarbon liquids as defined herein cause skin irritation even when used at relatively low concentrations of from about 1% to about 60% by weight of an antiperspirant or deodorant composition. It has also been found that the mitigating materials as defined herein provide the composition of the present invention with the desired skin irritation mitigation, provided that it is incorporated into the composition at the requisite vapor pressure and weight ratios relative to the selected volatile, nonpolar hydrocarbon liquid.

The mitigating material component of the antiperspirant and deodorant compositions of the present invention may comprise one or more mitigating materials which individually or collectively are at a concentration of from about 1% to about 60%, preferably from about 5% to about 30%, more preferably from about 5% to about 10%, by weight of the composition. Any known or otherwise effective irritation-mitigating material can be used herein, provided that the mitigating material is formulated into the composition at the selected weight ratios defined above. It has been found that among these known or otherwise effective mitigating materials, nonvolatile silicone fluids are especially effective in reducing or eliminating skin irritation caused by the use of low concentrations of volatile, nonpolar hydrocarbon liquids.

The mitigating materials can also be characterized as those materials that effectively reduce skin irritation from an antiperspirant or deodorant composition when evaluated according to the 7-day cumulative skin irritation patch test described hereinafter. Skin irritation reduction is provided by a mitigating material when the mitigating composition shows a reduced LS mean irritation grade as compared to similar formulas where the mitigating material is replaced in the composition with water for aqueous compositions or cyclopentasiloxane for anhydrous compositions.

Preferred mitigating materials are nonvolatile-silicone containing materials. The

nonvolatile silicone-containing materials may be in the form of solids or liquids, preferably liquids, under ambient conditions. Preferred nonvolatile silicone-containing materials are nonvolatile silicone liquids, preferably having a viscosity as measured at 25.degree. C. of at least 5 centistokes, more preferably from about 10 centistokes to about 1000 centistokes, more preferably from about 10 centistokes to about 100 centistokes, even more preferably from about 30 centistokes to about 80 centistokes. Other suitable but less preferred silicones include silicone solids (e.g., silicone waxes) and silicone viscous fluids (e.g., silicone gums).

Nonlimiting examples of suitable silicone-containing mitigating materials for use herein include polyalkylsiloxanes, polyalkylarylsiloxanes, polyalkyl silanol siloxanes (e.g., dimethiconols) and polyethersiloxane copolymers, many examples of which are well known in the cosmetic and antiperspirant/deodorant arts, some of which are described in *Cosmetics, Science and Technology* 27-104 (M. Balsam and E. Sagarin ed. 1972); and U.S. Pat. No. 4,202,879, issued to Shelton on May 13, 1980, which descriptions are incorporated herein by reference.

Linear, nonvolatile polydimethylsiloxane fluids are the preferred silicone-containing material for use in the antiperspirant and deodorant compositions of the present invention. Examples of such preferred silicone-containing fluids include Dow Coming 200, Rhodorsil Oils 70047 available from Rhone-Poulenc, Masil SF Fluid available from Mazer, Dow Coming 225; SF-96 and SF-1214, SF-1236 and CF-1251 Silicone Fluids (available from G. E. Silicones); Viscasil and gums such as GE SE (available from General Electric Co.); and Silicone L-45, Silicone L530, Silicone L-531 (available from Union Carbide), and Siloxane F-221 and Silicone Fluid SWS-101 (available from SWS Silicones).

It has also been found that polyalkyl silanol siloxanes (e.g., dimethiconols such as DC1401; DC2-9023; DC4-2797; YF3800; GE88017; and blends thereof) are especially effective when used in antiperspirant compositions containing relatively polar gelling agents. These relatively polar gelling agents are described hereinafter and are those gelling agents that contain at least one highly polar functionality such as a carboxylic acid or amide functionality. It has been found that these silanol siloxanes provide a more stable composition than other silicone-containing materials when used in combination with the relatively polar gelling agents, and also provide skin irritation-mitigation benefits when also used in combination with the volatile, nonpolar hydrocarbon liquid as defined herein. Preferred are polyalkylsilanol siloxanes having about 0.1% to about 5.0% silanol content, preferably from about 0.5% to about 5.0% silanol content, and a viscosity of from about 20 centistokes to about 1000 centistokes, preferably from about 20 centistokes to about 100 centistokes.

Other nonlimiting examples of suitable silicone-containing mitigating materials include silicone polyethers or silicone glycols (such as dimethicone copolyol or dimethiconol); silicone alkyl-linked polyethers (such as Goldschmidt EM-90 cetyl dimethicone copolyol or EM-97); siloxane surfactants of a pendant/rake/comb

configuration, silicone surfactants of a trisiloxane configuration, and silicone surfactants of an ABA/alpha-omega block copolymers (such as polyoxyalkylenes, polyoxyethylene or ethoxylated, polyoxyethylene/polyoxypropylene or ethoxylated/propoxylated); aromatic substituted silicone emollients (such as phenyl, alpha-methyl styryl, styryl, methylphenyl, alkylphenyl); silicone copolymers with other functional groups include: hydrogen, alkyl, methyl, amino, trifluoropropyl, hydroxyl, vinyl, alkoxy, arylalkyl, aryl, phenyl, styryl, polyethers, esters, carboxylics; alkylmethyl siloxanes or silicone waxes (such as hexyl, octyl, decyl, lauryl, cetyl, stearyl); nonionic functional siloxane copolymers with terminal groups being silanol or trimethylsiloxy; nonionic functional siloxanes with backbone groups being trisiloxane or methicone linked; nonionic silicone surfactants; tetraethoxysilane; tetramethoxysilane; hexamethoxysilicone; oxmethoxytrisiloxane; silicone emulsifiers; silicone or siloxane resins, alkyl silicone resins, polyoxyalkylene silicone resins; MQ Resins such as GE SS4267, GE SS4230 and Shiseido/Shin-etsu, e.g. Japanese Patent Publication JP86143760 or from Walker Chem. 6MBH (described in EP722970); alkoxysiloxanes; alkoxysilanes; methicones; and combinations thereof.

Nonlimiting examples of other suitable silicone-containing mitigating materials include those available from Dow Corning: DC-556 Cosmetic Grade Fluid (phenyl trimethicone); DC-704 Diffusion Pump Fluid (Tetramethyl-Tetraphenyl-Trisiloxane); DC-705 Diffusion Pump Fluid; DC-1784 Emulsion; DC-AF Emulsion; DC-1520-US Emulsion; DC-593 Fluid (Dimethicone [and] Trimethylsiloxysilicate); DC-3225C Fluid (Cyclomethicone [and] Dimethicone Copolyol); DC-190 Fluid (Dimethicone Copolyol); DC-193 Fluid (Dimethicone Copolyol); DC-5200 Fluid (Laurylmethicone Copolyol); DC-6603 Polymer Powder; linear volatile dimethicones; DC-5640 Powder; DC-Q2-5220 (Dimethicone Copolyol); DC Q2-5324 (Dimethicone Copolyol); DC-2501 Cosmetic Wax (Dimethicone Copolyol); DC-2502 Fluid (Cetyl Dimethicone); DC-2503 Wax (Stearyl Dimethicone); DC-1731 Volatile Fluid (Caproyl Trimethicone); DC-580 Wax (Stearoxytrimethylsilane [and] Stearyl Alcohol); DC-1-3563 (Dimethiconal); DC-X2-1286 (Dimethiconol); DC-X2-1146A (Cylcomethicone [and] Dimethiconol); DC-8820 Fluid (Amino functionalized); DC Q5-0158A wax (stearoxytrimethylsilane); DC-Q2-8220 (Trimethylsilylamodimethicone); DC-7224 (Trimethylsilylamodimethicone); DC-X2-1318 Fluid (Cyclomethicone [and] Vinyl dimethicone); DC-QFI-3593A fluid (Trimethylsiloxysilicate); behenoxy dimethicone; bisphenyl hexa methicone; C24-C28 alkyl methicone; C30-C45 alkyl methicone; cetyl dimethicone; dimethicone gums; dimethicone copolyol acetate; dimethicone copolyol butyl ether; dimethicone copolyol methyl ether; diphenyl dimethicone; stearoxy dimethicone; stearoxy methicone/dimethicone copolymer; stearyl methicone; triphenyl trimethicone; and combinations thereof.

Other nonlimiting examples of suitable silicone-containing mitigating materials include those available from General Electric: GE SF-1023 (Dimethyl-Diphenyl-

Siloxane); GE CF-1142 (Methylphenyl Siloxane Fluid); GE SF-1153 (Dimethyl-Diphenyl-Siloxane); GE SF-1265 (Diphenyl-Dimethyl-Siloxane); GE SF-1328; GE SF-1188 (Dimethicone copolyol); GE SF-1188A (Silicone polyether copolymer); GE SF-1288 (silicone polyether copolymer, dimethyl-methyl 3-hydroxypropyl ethoxylated); GE SF-1318 (Methylester Siloxane); GE SF-1328 (silicone surfactant, dimethyl-methyl 3-hydroxypropyl ethoxylated-propoxylated); GE SF-1550 (methylphenyl siloxane, hexamethyl-3-phenyl-3-[[trimethylsilyl]oxy]trisiloxane); GE SF-1632 (silicone wax); GE SS-4267 (Dimethicone [and] Trimethylsiloxysilicate), and combinations thereof.

Other nonlimiting examples of suitable silicone-containing mitigating materials include those available from Goldschmidt: Abil EM-90 (silicone emulsifier); Abil EM-97 (polyether siloxane); Abil Waxes such as Abil B 88 series and Abil Wax 9810 (silicone wax or C24-28 methicone); Abil Wax 2434 (Stearoxy Dimethicone); Abil Wax 9800D (Stearyl Dimethicone); Tegomer H-Si 2111, H-Si 2311, A-Si 2120, A-Si 2320, C-Si 2141, C-Si 2341, E-Si 2130, E-Si 2330, V-Si 2150, V-Si 2550, H-Si 6420, H-Si 6440, H-Si 6460 (Alpha-Omega Dimethicone Copolymers) and combinations thereof.

Other nonlimiting examples of suitable silicone-containing mitigating materials include those available as Masil 756 from PPG Industries (Tetrabutoxypropyl Trisiloxane); bis-phenylhexamethicone (available as Silbione Oils 70633 V30 from Rhone-Poulenc); Silbione Oils 70646 (dimethicone copolyols from Rhone-Poulenc); Silicone L-71 1, L-720, L-721 and L722 (dimethicone copolyols from Union Carbide); Silicone L-7000, L-7001, L-7002, L-7004, L-7500, L-7600, L-7602, L-7604, L-7605, and L-7610 (dimethicone copolyols from Union Carbide); Unisil SF-R (dimethiconol from UPI); Silicate Cluster from Olin (Tris[tributoxysiloxy]methylsilane); Siloplane Fluids (available from Chisso Corp.) silicone copolymer F-754 (dimethicone copoly from SWS Silicones); Silwaxes from Siltech; Wacker Silicone Fluid L Series (available from Wacker Silicone) and combinations thereof.

Other nonlimiting examples of suitable nonvolatile silicones include those described in WO 7/16162 and WO 97/16161, both published on May 9, 1997, and both descriptions being incorporated by reference herein.

Other mitigating materials, although less preferred, are non-silicone containing organic emollients including petrolatum, lanolin, acetylated lanolin, hydroxylated lanolin, sucrose polyesters, cholesterol hydroxy stearate, and combinations thereof. Among the non-silicone containing emollients, highly occlusive materials such as petrolatum are most preferred.

From the lengthy excerpt above, it can be seen that Guskey embraces a significantly broad and lengthy laundry list of possible ingredients for use as the mitigating material in his composition. As a result, a near infinite number of different silicone based composition could be selected according to Guskey. In contrast, independent Claim 1 recites that the filmogenic

system includes 5 specific silicone-based components. There is absolutely no teaching in Guskey or in the other cited references that would lead one of ordinary skill in the art to select the recited 5 silicone components. That is, there is nothing in the prior art that would lead one of skill in the art to select a filmogenic system having cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone. In fact, the Examiner acknowledges that the list of possible silicone components is non-limiting and therefore it is even less likely that one of skill in the art would select the 5 silicone compositions recited in independent Claim 1. For these reasons, there is no basis for asserting that the claimed invention is *prima facie* obvious over Guskey in combination with any one of Brandt, Filipsk, Fourman, and Breton.

From the foregoing discussion, it can be seen that the combination of references fails to disclose or suggest a composition that includes a filmogenic system containing cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone as recited in independent Claim 1, and therefore Claim 1 and any claims dependent thereon are patentable over the cited art.

Additionally, the Supreme Court in *KSR v. Teleflex (KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, USPQ 2d 1385 (2007))* stated that the Examiner must provide an explicit explanation as to an "apparent reason to combine the known elements in the fashion claimed by the patent at issue." Here, the Examiner has failed to provide any explanation as to why of ordinary skill in the art would select the recited 5 silicone compositions from the nearly infinite possibilities that are described in Guskey. Thus, the Examiner has failed to provide any motivation as to why one of ordinary skill in the art would modify the composition of Guskey to arrive at the claimed invention. For this additional reason, the Applicant respectfully requests that the rejection be withdrawn.

None of the other cited references make up for the deficiencies of Guskey and in fact, have been cited for other purposes such that no proper combination of the references teaches or suggests the claimed invention.

Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness because 1) the combination of references fails to disclose or suggest the claimed composition

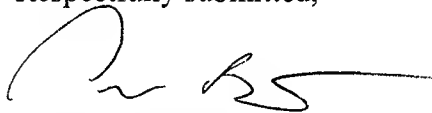
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containing cyclopentasiloxane, dimethiconol, dimethicone, trimethylsiloxysilicate and stearyl dimethicone; and 2) the Examiner has failed to provide a basis as to why one of ordinary skill in the art would select the claimed silicone compositions from the nearly infinite combinations that are possible based on the broad laundry list of silicone compositions described in Guskey. As such, it is respectfully submitted that the rejections based on the combination of Guskey with any one of Brandt, Filipusk, Fourman, and Breton be withdrawn.

New Claims 31-32 are patentable over the cited art for at least the same reasons stated above. Further, Guskey specifically teaches that his system is anhydrous and thus does not include water as a carrier. See column 3, lines 3-13.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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